



P3569.01 Continuation  
Serial No. 09/376,317

## AMENDED CLAIMS

(Version with Markings To Show Changes Made)

1. (Cancelled)
2. (Withdrawn)
3. (Withdrawn)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Withdrawn)
16. (Withdrawn)
17. (Withdrawn)
18. (Withdrawn)
19. (Withdrawn)

20. (Currently Amended) An implantable delivery system for delivering doses of genetic material to cardiac tissue, comprising:

a supply of recombinant nucleic acid vectors encoding a conduction protein selected from the group Cx40, Cx43, and Cx45;

a catheter, said catheter having a distal tip portion for engaging the cells of said cardiac tissue and delivering thereto said recombinant nucleic acid vectors;

a reservoir means for holding said supply of recombinant nucleic acid vectors; and  
[providing it to said distal tip portion of said catheter; and]

a delivery means for delivering and transfecting or transducing a therapeutically effective amount of said recombinant nucleic acid vectors from said reservoir means through said distal tip portion of said catheter to said cardiac tissue;

wherein said [delivery means] catheter additionally comprises a mapping electrode means, a pacing electrode means, and a conductor means for connecting said mapping electrode means [or] and a pacing electrode means to the proximal end of said catheter; and

wherein said mapping electrode means provides the means of determining the location of said cardiac tissue deficient in connexin expression for transfection or transduction of said cells in said cardiac tissue and wherein said pacing electrode means provides means for testing or controlling the effect of said connexin proteins with a pacemaker.

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21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

Claims 26-38 (withdrawn)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

Claims 43-47 (withdrawn)

48. (Cancelled)

49. (Cancelled)

50. (Cancelled)

Claims 51-60 (withdrawn)